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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,908	11/03/2003	Ian Faye	2783	4365

7590 01/11/2007  
STRIKER, STRIKER & STENBY  
103 East Neck Road  
Huntington, NY 11743

EXAMINER
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MERCADO, JULIAN A

ART UNIT	PAPER NUMBER
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1745

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/11/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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**Office Action Summary**

Application No.

10/699,908

Applicant(s)

FAYE ET AL.

Examiner

Julian Mercado

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 6,7,11,12 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,9,10,13,15 and 16 is/are rejected.
- 7) ☒ Claim(s) 4,5,8,14 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

Claims 6, 7, 11, 12 and 18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on December 27, 2006.

Claims 1-5, 8-10 and 13-17 are pending for consideration.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 9, 10, 13, 15 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Shimazu et al. (U.S. Pat. 6,783,877 B2).

For claim 1, Shimazu et al. teaches a fuel cell system comprising a fuel cell unit and a catalytically active reactor unit [24] for at least partial chemical transformation of an operating medium stream, wherein the catalytically active reactor unit has a catalytically active reactor volume acted on by the operating medium stream and the catalytically active reactor unit comprises a control means [25], i.e. “adjustable mask”, for controlling and/or for changing the catalytically active reactor volume acted on by the operating medium stream. See Figure 7 and

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col. 23 line 41 et seq.

For claim 2, the catalytically active reactor unit is a combustor, such as one for gasoline.

See col. 13 line 21 et seq.

For claim 3, a control means for controlling and/or changing a cross-sectional area of the reactor volume and the cross-sectional area, such as adjustable mask [24], extends transverse to a flow direction of the operating medium stream. See col. 23 lines 45-47.

For claim 9, the reactor unit has at least two outlet openings for outflow of a converted operating medium flow, such as illustrated in Figure 10.

For claim 10, a first of the outlet openings, such as [88D], is arranged upstream of a second of the outlet openings, such as [89D], in a flow direction of the operating medium stream, as shown in Figure 10.

For claim 13, the reactor unit has at least two reactor regions [26], three of which are shown in Figure 9, and each respective different permeabilities insofar as valves [88B, 89B, 90B] independently control the amount of gas introduced therein. See col. 24 line 3 et seq.

For claim 15, implementation of the fuel cell system includes vehicles. See col. 3 lines 9-14.

For claim 16, the fuel cell system adjusts the adjustable mask so that a smaller reactor volume is acted on by the operating medium stream during partial load operation than during full load operation, insofar as “the control unit 60 outputs drive signals to the adjustable mask 25 in accordance with the magnitude of the load....” See col. 23 line 64 et seq.

*Allowable Subject Matter*

Claims 4, 5, 8, 14 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or suggest the instant invention regarding a diaphragm device or means for controlling a length of the reactor volume changeable or movable in a flow direction of the operating medium stream, and regarding, in a second embodiment, a catalytically active reactor unit having at least two reactor regions with respective different catalytically active coatings.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



PATRICK JOSEPH RYAN  
SUPERVISORY PATENT EXAMINER